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CHRISTINA RIVER BASIN

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA

LOCATION.--Lat 39°58'07", long 75°40'25", Chester County, Hydrologic Unit 02040205, on left bank at downstream side of Sugars Bridge (U.S. Highway 322), 2,000 ft upstream from Valley Creek, 1.5 mi north of Marshallton, and 3.3 mi southeast of Downingtown.

DRAINAGE AREA.--89.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1972 to current year.

REVISED RECORDS.--WDR PA-75-1: 1972(P), 1973, 1974.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 195 ft above sea level, from topographic map. Feb. 1 to Apr. 10, and June 25 to Nov. 17, 1972, nonrecording gage at same site and datum.

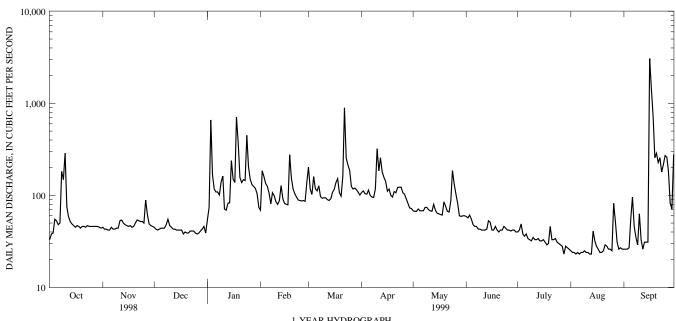
REMARKS.--No estimated daily discharges. Records fair. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 7.5 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

			DISCILL	GL, CODIC I	LLTTLKSL		AN VALUES		70 10 SLI 11	SVIBER 1999		
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	45	45	54	69	203	108	68	59	40	25	26
2	38	43	43	74	185	117	112	67	57	42	24	26
3	39	43	42	660	160	102	104	67	61	49	24	26
4	55	42	43	169	135	160	103	71	55	38	23	27
5	53	42	44	117	125	118	114	68	48	36	24	57
6 7 8 9 10	48 50 182 148 288	45 43 43 44 44	44 44 48 55 47	109 109 101 140 162	105 81 107 99 85	112 127 97 93 94	100 96 95 118 321	68 68 74 74 70	46 46 43 43	38 34 33 32 35	23 24 24 25 24	96 46 35 29 63
11	75	53	45	71	80	94	185	68	42	33	24	33
12	59	54	43	69	88	90	256	67	42	33	23	26
13	52	50	43	82	128	88	180	80	43	34	23	31
14	49	48	42	83	92	92	157	69	53	32	41	31
15	47	47	42	239	82	108	142	64	51	32	32	31
16	45	46	42	150	80	116	111	63	42	33	28	3080
17	47	47	42	138	79	138	117	62	42	31	26	1440
18	46	45	38	706	276	152	100	61	46	29	24	729
19	44	46	40	375	154	107	96	85	42	30	24	256
20	46	50	39	156	117	98	110	76	40	46	25	287
21	46	54	39	138	104	162	107	67	42	33	29	228
22	45	53	41	148	96	894	122	66	42	33	28	256
23	47	52	41	145	89	255	123	88	46	34	26	179
24	46	52	41	450	88	214	123	186	44	31	26	216
25	46	50	39	206	87	187	107	133	42	30	25	271
26 27 28 29 30 31	46 46 46 45 44	89 62 49 47 46	38 39 41 43 46 39	150 131 125 119 104 74	88 86 140 	125 117 120 115 108 101	103 92 82 73 72	103 82 60 59 60	42 41 42 42 40	29 28 23 28 27 26	82 52 31 26 27 26	260 181 82 71 278
TOTAL	1947	1474	1318	5554	3105	4704	3729	2354	1366	1032	888	8397
MEAN	62.8	49.1	42.5	179	111	152	124	75.9	45.5	33.3	28.6	280
MAX	288	89	55	706	276	894	321	186	61	49	82	3080
MIN	33	42	38	54	69	88	72	59	40	23	23	26
STATIST	CICS OF MO	ONTHLY MEA	AN DATA FO	OR WATER	YEARS 1974	1 - 1999,	BY WATER	YEAR (WY))			
MEAN	92.5	114	170	189	179	218	211	171	117	111	74.6	94.7
MAX	304	242	577	527	409	525	594	410	315	421	177	292
(WY)	1997	1997	1997	1979	1979	1994	1983	1989	1982	1984	1996	1979
MIN	41.2	43.6	40.8	30.9	74.6	61.6	53.1	75.9	45.5	33.3	28.6	29.5
(WY)	1987	1974	1981	1981	1980	1985	1985	1999	1999	1999	1999	1980

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALEN	DAR YEAR	FOR 1999 WAT	ER YEAR	WATER YEAR	s 1974 - 1999
ANNUAL TOTAL	43561		35868			
ANNUAL MEAN	119		98.3		145	
HIGHEST ANNUAL MEAN					257	1984
LOWEST ANNUAL MEAN					59.7	1981
HIGHEST DAILY MEAN	1190	Apr 2	3080	Sep 16	3080	Sep 16 1999
LOWEST DAILY MEAN	33	Oct 1	23	Jul 28 a	23	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	38	Sep 27	24	Aug 2	24	Aug 2 1999
INSTANTANEOUS PEAK FLOW			b 7200	Sep 16	c 8160	Jun 22 1972
INSTANTANEOUS PEAK STAGE			14.79	Sep 16	14.79	Sep 16 1999
10 PERCENT EXCEEDS	240		161		279	
50 PERCENT EXCEEDS	79		54		94	
90 PERCENT EXCEEDS	42		29		41	



1-YEAR HYDROGRAPH OCTOBER 1, 1998 TO SEPTEMBER 30, 1999

<sup>a Also Aug. 4, 6, 12, 13.
b From rating curve extended above 3,600 ft³/s on basis of runoff comparison with nearby station.
c From rating curve extended above 3,600 ft³/s on basis of slope-area measurement of peak flow at gage height 13.40 ft.</sup>

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to September 1966, October 1970 to current year.

PERIOD OF DAILY RECORD.-SPECIFIC CONDUCTANCE: February 1972 to current year.

pH: February 1972 to current year.
WATER TEMPERATURES: February 1972 to current year.
DISSOLVED OXYGEN: February 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1972.

REMARKS.-Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 652 microsiemens, Feb. 6, 1977; minimum, 67 microsiemens, July 1, 1984. pH: Maximum, 9.9, May 13, June 5, 1973; minimum, 5.4, Oct. 24, 26, 1973.
WATER TEMPERATURE: Maximum, 33.0°C, July 18, 1977; minimum, 0.0°C, many days during winters.

DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Mar. 18, 1989; minimum, 0.8 mg/L, July 23, 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	ANCE (µS/CM)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 1998 13	0900	80020	1028	53	8.8	7.7	308	16.0	110	28
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)		PERCENT	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	DIS- SOLVED (MG/L AS CL)	(MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLVED (MG/L AS SO4)
OCT 1998 13	9.2	4.1	. 6	15	22	81	23	<.10	12	23
13	9.2	4.1	.0	15	22	81	23	<.10	12	23
DATE	AMMO DI SOL (MG AS	N, GE NIA NO2+ S- DI VED SOL /L (MG	N, GE NO3 NITR S- DI VED SOL /L (MG N) AS	S- DIS VED SOLV (MG, N) AS I	RUS SUM FHO, CONS S- TUEI /ED D: /L SOI	$STI-INTS, DINTS, DIS-SOILVED (\muCG/L) AS$	LVED SOL	S- DI VED SOL G/L (μα AS) AS	VED SOL β/L (μα B) AS	S- VED G/L CD)
OCT 1998 13		3 2.4	4 <.0	10 .0	74 1'	74 <	10 <1	. 10	7 <1.	0
DATE	CHR MIU DIS SOL ((µG AS	O- M, COPP - DIS VED SOL	ER, IRO - DI VED SOL	ON, LEZ S- DI VED SOI G/L (μ FE) AS	MAI AD, NES IS- D LVED SOI G/L (μ	NGA- SE, MERG IS- DI LVED SOI G/L (µ MN) AS	MOL CURY DEN IS- DI LVED SOL G/L (HG) AS	.YB- IUM, NICK .S- DIS .VED SOL G/L (μ	EL, ZIN - DI - VED SOI G/L (µ NI) AS	IC, SS- VED G/L ZN)
OCT 1998 13		0 2.	6 35	<1	.0 2:	2 <	.1 1.	5 1.	2 <2	10

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.45 µM-MF (COLS./ 100 ML) (31616)	TOTAL UREASE (COL / 100 ML)
MAR 1999										
11	1005	1028	1028	92	14.1	7.7	283	4.5	73	
22	1040	1028	1028	973	11.4	7.4	152	6.5	2100	
31	0750	1028	1028	99		7.7	265	8.5	K80	
APR										
16	0800	1028	1028	101	9.4	7.5	258	11.5	460	
29	0835	1028	1028	71	10.4	7.5	286	12.5	190	
MAY										
03	1055	1028	1028	66	11.3	7.7	295	14.0	660	
18	1037	1028	1028	58	9.9	7.8	285	16.0	150	110
25	1440	1028	1028	116	9.4	7.7	244	18.0	4500	
JUN										
02	1155	1028	1028	59	6.7	7.7	303	22.0	530	
23	1335	1028	1028	48	9.6	7.9	334	23.5	K1600	
28	1012	1028	1028	42	6.2	7.5	342	24.0	390	
JUL										
15	1115	1028	1028	33	8.5	7.7	386	20.5	K390	
19	0907	1028	1028	29	6.4	7.4	405	24.0	470	
20	1205	1028	1028	47	5.5	7.2	342	24.5	K65	
26	1140	1028	1028	30	8.0	7.7	360	24.5	920	
AUG	1055	1000	1000	0.0		- 4	200	0.4.0	600	
03	1055	1028	1028	23	6.8	7.4	390	24.0	680	
16	1235	1028	1028	29	6.8	7.6	349	24.5	550	
26	1116	1028	1028	92	6.8	7.0	220	20.5	5000	1000
SEP	1115	1000	1000	2.5	6 0	7 2	220	02.0	4000	
08	1115	1028	1028	35	6.9	7.3	330	23.0	4000	
14	1200	1028	1028	34	6.8	7.5 7.4	379	20.0	410	1.6000
16	0832	1028	1028	249	6.9	7.4	166	19.5	12000	16000
27	1150	1028	1028	254	7.0	1.2	232	16.0	K1400	

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA BENTHIC MACROINVERTEBRATES

Senthic Macroinvertebrate	10/13/98 Count
latyhelminthes	
Turbellaria (Flatworms)	
Tricladida	_
Planariidae Iollusca	2
Gastropoda (Snails)	
Basommatophora	
Ancylidae	2
Ferrissia Bivalvia (Clams)	3
Veneroida	
Sphaeriidae	1
nnelida (Segmented Worms)	7
Oligochaeta rthropoda	/
Acariformes	
Hydrachnidia (Water Mites)	88
Crustacea	
Amphipoda (Scuds) Gammaridae	
Gammarus	16
Insecta	
Ephemeroptera (Mayflies) Baetidae	
Baetis	3
Pseudocloeon	1
Caenidae	15
Caenis Ephemerellidae	15
Serratella	23
Heptageniidae	
Stenonema La contributo	22
Isonychiidae Isonychia	1
Leptohyphidae	_
Tricorythodes	36
Trichoptera (Caddisflies) Helicopsychidae	
Helicopsyche	2
Hydropsychidae	
Cheumatopsyche	96
<i>Hydropsyche</i> Hydroptilidae	267
Leucotrichia	8
Philopotamidae	_
Chimarra Polysomtomidae	2
Polycentropidae Neureclipsis	1
Uenoidae	1
Neophylax	2
Lepidoptera Pyralididae (Moths)	
Petrophila	15
Coleoptera (Beetles)	
Elmidae (Riffle Beetles)	2
Ancyronyx Optioservus	3 151
Oulimnius	7
Stenelmis	28
Psephenidae (Water Pennies)	
Psephenus Diptera (True Flies)	6
Chironomidae (Midges)	15
Empididae (Dance Flies)	
Hemerodromia	3
Simuliidae (Black Flies) Simulium	5
Tipulidae (Crane Flies)	
Antocha	32
otal count	861

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

			· · · · · · · · · · · · · · · · · · ·									
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER		,	NOVEMBER			DECEMBER			JANUARY	
		OCIOBER		•	NOVEMBER			DECEMBER			UANUARI	
1	387	357	372	371	310	343						
2	391	332	357	362	299	328						
3 4	399 387	343 310	369 344	358 356	319 323	340 337						
5	354	316	337	375	325	351						
_												
6 7	355 369	318 337	343 352	370 380	335 318	354 353						
8	366	204	296	373	307	348						
9	273	184	238	365	321	347						
10	237	181	201	358	311	339						
11	303	237	265	360	303	335						
12	318	287	303	335	299	321						
13	326	300	316	350	327	337						
14 15	337 354	314 319	325 336	355 346	300 275	327 312						
16	369	339	356	346	300	327						
17 18	356 355	305 302	333 332	337 341	307 297	325 322						
19	362	318	346	343	313	331						
20	355	309	341	353	311	332						
21	361	328	347	354	297	329						
22	364	335	351	350	299	328						
23	368	325	348	343	300	327						
24 25	376 373	317 324	346 353	347 346	296 319	327 331						
23	373	324	333	340	319	331						
26	370	316	346	329	237	272						
27	354	313 332	340	294	247 279	267 297						
28 29	356 350	321	342 339	311 332	279	311						
30	361	320	345	333	296	316						
31	374	314	347									
MONTH	399	181	331	380	237	327						
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX			MAX		MEAN	MAX		MEAN	MAX		MEAN
DAY	MAX	MIN FEBRUAR		MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1		FEBRUAR	Y 	232	MARCH 200	211	285	APRIL 266	276	316	MAY 286	302
1 2		FEBRUAR	 	232 273	MARCH 200 230	211 247	285 275	APRIL 266 257	276 267	316 321	MAY 286 287	302 306
1 2 3		FEBRUAR	Y 	232	MARCH 200	211	285	APRIL 266	276	316 321 319	MAY 286 287 290	302 306 305
1 2		FEBRUAR	 	232 273 285	MARCH 200 230 268	211 247 276	285 275 278	266 257 258	276 267 270	316 321	MAY 286 287	302 306
1 2 3 4 5		FEBRUAR*	 	232 273 285 	200 230 268 	211 247 276 	285 275 278 	266 257 258 	276 267 270 	316 321 319 317 317	MAY 286 287 290 289 297	302 306 305 304 308
1 2 3 4		FEBRUAR:	 	232 273 285	200 230 268	211 247 276	285 275 278 	266 257 258	276 267 270	316 321 319 317	MAY 286 287 290 289	302 306 305 304
1 2 3 4 5		FEBRUAR'	 	232 273 285 288 277 294	200 230 268 267 244 268	211 247 276 277 261 281	285 275 278 282 280 283	266 257 258 263 264 266	276 267 270 272 272 275	316 321 319 317 317 315 318 306	286 287 290 289 297 299 296 279	302 306 305 304 308 306 306 295
1 2 3 4 5 6 7 8 9		FEBRUAR*	Y	232 273 285 288 277 294 295	200 230 268 267 244 268 278	211 247 276 277 261 281 286	285 275 278 282 280 283 285	266 257 258 263 264 266 212	276 267 270 272 272 272 275 272	316 321 319 317 317 315 318 306 299	286 287 290 289 297 299 296 279 269	302 306 305 304 308 306 306 295 287
1 2 3 4 5	==== ==== ====	FEBRUAR'	 	232 273 285 288 277 294	200 230 268 267 244 268	211 247 276 277 261 281	285 275 278 282 280 283	266 257 258 263 264 266	276 267 270 272 272 275	316 321 319 317 317 315 318 306	286 287 290 289 297 299 296 279	302 306 305 304 308 306 306 295
1 2 3 4 5 6 7 8 9 10		FEBRUAR'	Y	232 273 285 288 277 294 295 296	200 230 268 267 244 268 278 278	211 247 276 277 261 281 286 288	285 275 278 282 280 283 285 212	266 257 258 263 264 266 212 167	276 267 270 272 272 275 272 191 223	316 321 319 317 317 315 318 306 299 303	MAY 286 287 290 289 297 299 296 279 269 274	302 306 305 304 308 306 306 295 287 291
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	232 273 285 288 277 294 295 296	200 230 268 267 244 268 278 278 278	211 247 276 277 261 281 286 288 289 291	285 275 278 282 280 283 283 212	266 257 258 263 264 266 212 167	276 267 270 272 272 275 275 275 279 191	316 321 319 317 317 315 318 306 299 303	286 287 290 289 297 299 296 279 269 274	302 306 305 304 308 306 306 295 287 291
1 2 3 4 5 6 7 8 9 10		FEBRUAR'	Y	232 273 285 288 277 294 295 296	200 230 268 267 244 268 278 278 278 280 277	211 247 276 277 261 281 286 288 289 291 294	285 275 278 278 282 280 283 285 212 238 222 235	266 257 258 263 264 266 212 167 211 190 219	276 267 270 272 272 275 272 191 223 205 226	316 321 319 317 317 315 318 306 299 303	286 287 299 297 299 296 279 269 274 295 274	302 306 305 304 308 306 306 295 287 291
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	232 273 285 288 277 294 295 296	200 230 268 267 244 268 278 278 278	211 247 276 277 261 281 286 288 289 291	285 275 278 282 280 283 283 212	266 257 258 263 264 266 212 167	276 267 270 272 272 275 275 275 279 191	316 321 319 317 317 315 318 306 299 303	286 287 290 289 297 299 296 279 269 274	302 306 305 304 308 306 306 295 287 291
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351	200 230 268 267 244 268 278 278 278 278 276 	211 247 276 277 261 281 286 288 289 291 294 300	285 275 278 282 280 283 285 212 238 222 235 241 264	266 257 258 263 264 266 212 167 211 190 219 231 233	276 267 270 272 272 275 275 272 191 223 205 226 236 240	316 321 319 317 317 315 318 306 299 303 314 304 305 328	286 287 299 297 299 296 279 269 274 295 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR*	Y	232 273 285 288 277 294 295 296 298 302 306 351 	200 230 268 267 244 268 278 278 278 280 277 276 	211 247 276 277 261 281 286 288 289 291 294 300	285 275 278 282 280 283 285 212 238 222 235 241 264	266 257 258 263 264 266 212 167 211 190 219 231 233	276 267 270 272 272 275 272 191 223 205 226 236 240	316 321 319 317 317 315 318 306 299 303 314 304 305 328	286 287 290 289 297 299 296 276 274 295 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18		FEBRUAR*	Y	232 273 285 288 277 294 295 296 298 302 306 351 	200 230 268 267 244 268 278 278 278 278 276 	211 247 276 277 261 281 286 288 289 291 294 300 314 255	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 273	266 257 258 263 264 266 212 167 211 190 219 231 233 253 242 250	276 267 270 272 272 275 275 275 272 191 223 205 226 236 240 263 253 262	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320	286 287 290 289 297 298 299 274 295 274 282 279 286 279 286 274	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18		FEBRUAR*	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295	200 230 268 267 244 268 278 278 278 278 277 276 285 237 272	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 263 273 263	266 257 258 263 264 266 212 167 211 190 219 231 233 242 250 257	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 262	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303	286 287 290 289 297 299 296 274 274 280 282 279 286 279 286 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298 279
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 	200 230 268 267 244 268 278 278 278 278 276 	211 247 276 277 261 281 286 288 289 291 294 300 314 255	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 273	266 257 258 263 264 266 212 167 211 190 219 231 233 253 242 250	276 267 270 272 272 275 275 275 272 191 223 205 226 236 240 263 253 262	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320	286 287 290 289 297 298 299 274 295 274 282 279 286 279 286 274	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21		FEBRUAR*	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298	200 230 268 267 244 268 278 278 278 278 277 276 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 270 263	266 257 258 263 264 266 212 167 211 190 231 233 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296	286 287 290 289 297 299 296 274 269 274 280 282 279 286 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298 279 283
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298	200 230 268 267 244 268 278 278 278 278 277 276 285 237 272 279	211 247 276 277 261 286 288 289 291 294 300 314 255 281 290	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 273 286 270	266 257 258 263 264 266 212 167 211 190 219 231 233 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258	316 321 319 317 317 315 318 306 299 303 314 305 328 311 317 320 303 296	286 287 290 289 297 299 296 279 269 274 295 274 280 282 279 286 277 286 275 286 276	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298 279 283 295 299
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298	200 230 268 267 244 268 278 278 278 278 276 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220	285 275 278 282 280 283 225 212 238 222 235 241 264 273 263 273 286 270 263 270	266 257 258 263 264 262 212 167 211 190 219 231 233 253 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296	286 287 290 289 297 298 297 298 274 295 274 282 279 286 274 258 274 258 278 269 274 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306 302 298 279 283 295 298 279 283
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298	200 230 268 267 244 268 278 278 278 278 277 276 285 237 272 279	211 247 276 277 261 286 288 289 291 294 300 314 255 281 290	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 273 286 270	266 257 258 263 264 266 212 167 211 190 219 231 233 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258	316 321 319 317 317 315 318 306 299 303 314 305 328 311 317 320 303 296	286 287 290 289 297 299 296 279 269 274 295 274 280 282 279 286 277 286 275 286 276	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298 279 283 295 299
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	 	FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298 298 298	200 230 268 267 244 268 278 278 278 278 279 277 276 285 237 272 279	211 247 276 277 261 286 288 289 291 294 300 314 255 281 290 279 220 230 236	285 275 278 282 280 283 225 212 238 222 235 241 264 273 263 273 286 270 263 267 263 260 271	266 257 258 263 264 266 212 167 211 190 219 231 233 253 242 250 257 249 250 246 244 237 246	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 249 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 310 313 284 245	286 287 290 289 297 299 296 274 295 274 280 282 279 286 274 255 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306 302 298 279 283 295 299 283 232 230
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	 	FEBRUAR:	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298 298 298 298 298 295 296	200 230 268 267 244 268 278 278 278 278 279 276 285 237 272 279 176 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220 230 236 261	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 270 263 267 263 260 271	266 257 258 263 264 266 212 167 211 190 231 233 242 250 257 249 250 246 244 237 246	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 258 257 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 310 313 284 245	286 287 290 289 297 299 296 274 269 274 280 282 279 286 274 281 268 276 282 279 286 276 282 279 286 276 276 276 276 277 278 278 278 278 278 278 278 278 278	302 306 305 304 308 306 306 295 287 291 305 288 295 306 300 302 298 279 283 295 299 283 295 299 283 230 230 251
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	 	FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 295 298 298 298	200 230 268 267 244 268 278 278 278 278 279 277 276 285 237 272 279	211 247 276 277 261 286 288 289 291 294 300 314 255 281 290 279 220 230 236	285 275 278 282 280 283 225 212 238 222 235 241 264 273 263 273 286 270 263 267 263 260 271	266 257 258 263 264 266 212 167 211 190 219 231 233 253 242 250 257 249 250 246 244 237 246	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 249 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 310 313 284 245	286 287 290 289 297 299 296 274 295 274 280 282 279 286 274 255 274 280 282	302 306 305 304 308 306 306 295 287 291 305 288 295 306 302 298 279 283 295 299 283 232 230
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		FEBRUAR:		232 273 285 288 277 294 295 296 298 306 351 334 285 295 298 298 298 275 298 298 275 296	200 230 268 267 244 268 278 278 278 278 279 276 285 237 272 279 176 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220 230 236 261 267 264 263	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 263 267 263 267 263 263 267 263 263 267 271	266 257 258 263 264 266 212 167 211 190 231 233 242 250 257 249 250 246 244 237 246 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 249 258 261 270 281 281 281 281 281 281 281 281 281 281	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 310 313 284 245 273 290 314 316	286 287 290 289 297 299 296 274 269 274 280 282 279 286 274 258 276 284 258 276 284 281 260 162 209	302 306 305 304 308 306 306 295 287 291 305 288 295 306 302 298 279 283 295 299 283 295 299 283 232 230
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 20 20 20 20 20 20 20 20 20 20 20 20 20		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 298 298 298 298 295 298 295 295 296	200 230 268 267 244 268 278 278 280 277 276 285 237 272 279 176 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220 230 236 267 264 263 268	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 270 263 267 263 267 263 270 263 271 264 272 288 288 270	266 257 258 263 264 266 212 167 211 190 219 231 233 242 257 249 250 246 244 244 247 246 252 260 270 285	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 267 258 257 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 306 310 313 328 245 273 290 314 316 311	286 287 299 299 297 299 296 274 295 274 280 282 279 286 274 281 260 275 274 281 260 275 276 277 280 282	302 306 305 304 308 306 295 287 291 305 288 295 306 302 298 279 283 299 283 299 283 230 251 273 302 302 302 302 302 303 304 306 306 306 306 307 307 307 307 307 307 307 307 307 307
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		FEBRUAR:		232 273 285 288 277 294 295 296 298 306 351 334 285 295 298 298 298 275 298 298 275 296	200 230 268 267 244 268 278 278 278 278 279 276 285 237 272 279 176 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220 230 236 261 267 264 263	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 263 267 263 267 263 263 267 263 263 267 271	266 257 258 263 264 266 212 167 211 190 231 233 242 250 257 249 250 246 244 237 246 242 250 257 249	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 249 258 261 270 281 281 281 281 281 281 281 281 281 281	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 310 313 284 245 273 290 314 316	286 287 290 289 297 299 296 274 269 274 280 282 279 286 274 258 276 284 258 276 284 281 260 162 209	302 306 305 304 308 306 306 295 287 291 305 288 295 306 302 298 279 283 295 299 283 295 299 283 232 230 251 273 304 296 306 296 297 297 298 299 200 200 200 200 200 200 200 200 200
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 20 20 20 20 20 20 20 20 20 20 20 20 20		FEBRUAR	Y	232 273 285 288 277 294 295 296 298 302 306 351 334 285 298 298 298 298 295 298 295 295 296	200 230 268 267 244 268 278 278 280 277 276 285 237 272 279 176 285 237 272 279	211 247 276 277 261 281 286 288 289 291 294 300 314 255 281 290 279 220 230 236 267 264 263 268	285 275 278 282 280 283 285 212 238 222 235 241 264 273 263 270 263 267 263 267 263 270 263 271 264 272 288 288 270	266 257 258 263 264 266 212 167 211 190 219 231 233 242 257 249 250 246 244 244 247 246 252 260 270 285	276 267 270 272 272 275 272 191 223 205 226 236 240 263 253 262 267 258 257 254 253 267 258 257 258	316 321 319 317 317 315 318 306 299 303 314 304 305 328 311 317 320 303 296 306 310 313 328 245 273 290 314 316 311	286 287 299 299 297 299 296 274 295 274 280 282 279 286 274 281 260 275 274 281 260 275 276 277 280 282	302 306 305 304 308 306 295 287 291 305 288 295 306 302 298 279 283 299 283 299 283 230 251 273 302 302 302 302 302 303 304 306 306 306 306 307 307 307 307 307 307 307 307 307 307

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		S	EPTEMBE	R
1 2 3 4 5	321 331 326 331 348	287 293 297 300 305	305 315 313 318 330	363 373 371 382 408	336 336 289 327 343	355 355 333 357 377	443 454 408 418 413	374 367 343 356 369	419 409 385 394 398	431 440 449 446 475	381 419 400 408 198	407 430 430 430 403
6 7 8 9 10	362 359 357 390 389	315 314 291 348 349	341 343 332 367 368	396 397 407 410 413	342 357 370 383 351	365 379 388 398 386	408 455 442 434 448	366 381 378 377 375	395 422 419 412 415	310 338 385 435 401	211 269 328 380 283	256 320 349 403 320
11 12 13 14 15	364 377 378 352 346	336 333 326 302 309	351 357 357 323 325	411 414 402 401 402	345 361 349 363 380	385 396 382 387 394	441 433 445 435 392	397 403 417 270 321	422 423 435 344 352	424 468 474 418 426	337 418 368 366 387	375 438 412 389 404
16 17 18 19 20	360 360 361 369 374	334 331 326 323 323	348 349 344 349 356	417 424 426 429 405	372 367 361 302 263	397 402 403 384 358	413 416 442 428 432	349 362 394 396 399	385 393 415 413 416	398 	82 	201
21 22 23 24 25	372 359 358 344 359	331 329 313 315 326	358 348 336 333 344	401 400 398 407 411	364 373 357 352 354	383 385 381 385 389	417 421 430 457 462	356 362 381 384 428	395 395 414 416 441	256 273 280	239 254 242	248 265 259
26 27 28 29 30 31	371 381 383 366 364	324 327 335 330 342	351 360 363 353 356 	410 435 417 463 467 432	356 383 338 340 396 382	392 414 386 414 428 413	 387 433 430 429	286 381 380 392	341 405 404 409	316 320 323	 284 294 188	300 307 237
MONTH	390	287	343	467	263	386	462	270	403	475	82	345

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAI	PIAZ		PIEAN									
		OCTOBER		N	OVEMBER			DECEMBER			JANUARY	
1	8.0	7.4	7.6	8.2	7.3	7.6						
2 3	8.0 8.2	7.5 7.6	7.7	8.3 8.2	7.3 7.3	7.6 7.6						
4	7.7	7.5	7.8 7.6	8.3	7.3	7.6						
5	8.0	7.5	7.7	8.4	7.4	7.7						
6	8.0	7.5 7.5	7.7	8.3	7.4	7.7						
7 8	8.1 7.6	7.5	7.7 7.5	8.4 8.3	7.4 7.3	7.7 7.6						
9	7.5	7.3	7.4	8.5	7.3	7.7						
10	7.4	7.3	7.3	7.9	7.3	7.5						
11	7.4	7.3	7.3	7.9	7.2	7.4						
12 13	7.4 7.4	7.3 7.3	7.3 7.3	7.9 8.0	7.2 7.3	7.5 7.5						
14	7.4	7.3	7.3	8.0	7.3	7.5						
15	7.8	7.4	7.6	8.4	7.2	7.6						
16	7.8	7.5	7.6	8.4	7.3	7.6						
17	7.9	7.4	7.6	8.3	7.2	7.6						
18 19	7.9 7.7	7.3 7.2	7.5 7.4	8.6 8.8	7.2 7.3	7.7 7.8						
20	7.7	7.2	7.5	8.4	7.3	7.6						
20			,.5	0.1	, . 5	,						
21	8.0	7.3	7.6	8.7	7.3	7.7						
22	8.0	7.4	7.6	8.7	7.4	7.8						
23	8.0	7.4	7.6	8.6	7.4	7.7						
24 25	8.1 8.1	7.4 7.3	7.6 7.6	8.5 8.7	7.3 7.3	7.7 7.8						
23	0.1	7.3	7.0	0.7	1.3	7.0						
26	8.1	7.3	7.6	7.4	7.2	7.3						
27	7.9	7.3	7.5	7.6	7.2	7.3						
28	7.8	7.3	7.5	7.7	7.3	7.4						
29 30	7.9 7.9	7.3 7.3	7.5 7.5	7.8 7.9	7.3 7.2	7.4 7.5						
31	8.0	7.3	7.5	7.9	7.2	7.5						
51	0.0		3									
MONTH	8.2	7.2	7.5	8.8	7.2	7.6						

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUAR	Y		MARCH			APRIL			MAY	
1 2 3 4 5		 	 	7.8 8.1 8.3 	7.5 7.5 7.5 	7.6 7.7 7.8 	8.0 8.8 8.9 	7.4 7.4 7.4 	7.7 7.9 8.0	8.3 8.2 7.8 8.4 8.5	7.4 7.4 7.4 7.4 7.4	7.8 7.8 7.6 7.8 7.8
6 7 8 9 10	 	 	 	8.0 8.2 8.1 8.1 8.2	7.6 7.6 7.6 7.5 7.5	7.8 7.8 7.8 7.8 7.8	8.8 8.9 8.9 8.3 7.8	7.5 7.5 7.5 7.4 7.4	8.0 8.0 8.1 7.7 7.6	8.0 7.9 8.1 8.1 8.3	7.4 7.4 7.4 7.4 7.4	7.6 7.6 7.6 7.7 7.7
11 12 13 14 15	 	 	 	8.1 8.4 8.2 8.2	7.5 7.5 7.5 7.5	7.7 7.8 7.8 7.8	7.7 7.9 8.2 8.4 8.6	7.4 7.4 7.5 7.5 7.5	7.5 7.6 7.7 7.8 7.9	8.5 7.7 8.1 8.1	 7.4 7.3 7.4 7.4	7.9 7.5 7.7 7.7
16 17 18 19 20	 	 	 	8.4 8.3 8.5 8.6	7.4 7.4 7.4 7.5	7.8 7.7 7.8 7.9	7.9 8.6 8.6 8.8 8.5	7.5 7.5 7.5 7.5 7.5	7.7 7.9 8.0 8.1 7.8	8.0 7.9 7.9 7.5 8.0	7.4 7.4 7.3 7.3 7.4	7.7 7.6 7.6 7.4 7.6
21 22 23 24 25	 8.1 8.0	 7.8 7.7	 7.9 7.8	8.2 7.7 7.9 8.1	7.3 7.4 7.5 7.5	7.7 7.6 7.7 7.7	8.8 8.9 8.1 8.6 8.5	7.5 7.5 7.4 7.4 7.5	8.1 8.0 7.7 7.9 7.9	8.0 8.0 7.6 7.5 7.7	7.5 7.5 7.4 7.3 7.4	7.7 7.7 7.5 7.4 7.6
26 27 28 29 30 31	8.1 8.1 7.8 	7.7 7.7 7.5 	7.8 7.8 7.7 	8.2 8.2 8.2 8.7 8.8	7.5 7.5 7.6 7.6 7.6 7.5	7.8 7.8 7.8 7.9 8.0 8.0	8.5 8.5 8.3 8.4 8.4	7.4 7.4 7.4 7.4 7.4	7.9 7.9 7.8 7.8 7.8	7.7 7.7 7.8 7.8 7.9 7.8	7.5 7.5 7.5 7.5 7.5	7.6 7.6 7.6 7.6 7.6 7.6
MONTH	8.1	7.5	7.8	8.8	7.3	7.8	8.9	7.4	7.8	8.5	7.3	7.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY 1 2 3 4 5	7.8 7.9 7.9 8.0 8.1	MIN JUNE 7.4 7.4 7.3 7.5 7.5	MEAN 7.6 7.6 7.6 7.6 7.7	7.8 8.1 8.0 8.1 7.9	MIN 7.4 7.4 7.4 7.4 7.4 7.3	MEAN 7.6 7.7 7.6 7.6 7.7	MAX 8.3 8.2 8.5 8.6 8.4	MIN AUGUST 7.2 7.3 7.3 7.3 7.3 7.3	MEAN 7.6 7.6 7.7 7.8 7.7		MIN 5EPTEMBE 7.3 7.2 7.2 7.1 6.9	
1 2 3 4	7.8 7.9 7.9 8.0	7.4 7.4 7.3 7.5	7.6 7.6 7.6 7.7	7.8 8.1 8.0 8.1	7.4 7.4 7.4 7.4 7.4	7.6 7.7 7.6 7.6	8.3 8.2 8.5 8.6	7.2 7.3 7.3 7.3	7.6 7.6 7.7 7.8	7.6 7.5 7.5 7.3	7.3 7.2 7.2 7.2 7.1	7.4 7.4 7.3 7.2
1 2 3 4 5 6 7 8 9	7.8 7.9 7.9 8.0 8.1 8.1 8.0 8.0 7.8	7.4 7.4 7.3 7.5 7.5 7.5 7.5	7.6 7.6 7.6 7.7 7.7 7.7 7.7 7.6 7.5	7.8 8.1 8.0 8.1 7.9 7.9 7.8 7.9	7.4 7.4 7.4 7.4 7.3 7.3 7.3 7.3 7.3	7.6 7.7 7.6 7.6 7.5 7.5 7.5 7.5	8.3 8.2 8.5 8.6 8.4 8.4 7.7	7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.2 7.2	7.6 7.6 7.7 7.8 7.7 7.7 7.7 7.4	7.6 7.5 7.5 7.3 7.2 7.0 7.2 7.6 7.6	7.3 7.2 7.2 7.1 6.9 6.8 7.0 7.1 7.3	7.4 7.4 7.3 7.2 7.1 6.9 7.1 7.3 7.4
1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.8 7.9 8.0 8.1 8.1 8.0 7.8 7.7	7.4 7.4 7.5 7.5 7.5 7.4 7.4 7.3 7.3	7.6 7.6 7.6 7.7 7.7 7.7 7.7 7.5 7.5 7.5	7.8 8.1 8.0 8.1 7.9 7.8 7.9 8.0 7.8 8.1 7.9	7.4 7.4 7.4 7.3 7.3 7.3 7.3 7.4 7.4 7.4	7.6 7.7 7.6 7.5 7.5 7.5 7.5 7.6 7.6 7.6 7.7	8.3 8.2 8.5 8.6 8.4 8.4 7.7 7.9 7.8 7.8 7.5	7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.2 7.2 7.2 7.2 7.2 7.0	7.6 7.6 7.7 7.8 7.7 7.7 7.7 7.4 7.4 7.4 7.5 7.4	7.6 7.5 7.5 7.3 7.2 7.0 7.2 7.6 7.6 7.5 7.5	7.3 7.2 7.2 7.1 6.9 6.8 7.0 7.1 7.3 7.3 7.3	7.4 7.4 7.3 7.2 7.1 6.9 7.1 7.3 7.4 7.4
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	7.8 7.9 8.0 8.1 8.1 8.0 7.8 7.7 7.9 7.8 7.7 8.0 8.1 7.8 9.0	7.4 7.4 7.5 7.5 7.5 7.5 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.4	7.6 7.6 7.7 7.7 7.7 7.7 7.5 7.5 7.6 7.5 7.6 7.6 7.6 7.6	7.8 8.1 8.0 8.1 7.9 7.8 7.9 8.0 7.8 8.1 7.9 8.1 8.1 8.2	7.4 7.4 7.4 7.3 7.3 7.3 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	7.6 7.7 7.6 7.5 7.5 7.5 7.5 7.6 7.6 7.7 7.7 7.7	8.3 8.2 8.5 8.6 8.4 8.4 7.7 7.9 7.8 7.8 7.5 7.5 7.9 7.9	7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	7.6 7.6 7.7 7.8 7.7 7.7 7.7 7.4 7.4 7.4 7.4 7.5 7.4 7.2 7.3	7.6 7.5 7.3 7.2 7.0 7.2 7.6 7.6 7.5 7.5 7.5 7.5 7.4	7.3 7.2 7.1 6.9 6.8 7.0 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.4 7.3 7.2 7.1 6.9 7.1 7.3 7.4 7.4 7.3 7.4 7.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	7.8 7.9 8.0 8.1 8.1 8.0 7.8 7.7 7.9 7.8 7.7 8.0 8.1 7.8 9.0 7.9	7.4 7.4 7.5 7.5 7.5 7.5 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.5 7.5	7.6 7.6 7.7 7.7 7.7 7.7 7.5 7.5 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6	7.8 8.1 8.0 8.1 7.9 7.8 7.9 8.0 7.8 8.1 8.1 8.2 8.3 8.3 7.5	7.4 7.4 7.4 7.3 7.3 7.3 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	7.6 7.7 7.6 7.5 7.5 7.5 7.5 7.6 7.5 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	8.3 8.2 8.5 8.6 8.4 8.4 7.7 7.9 7.8 7.8 7.5 7.5 7.9 7.9 7.5 7.5	7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	7.6 7.6 7.7 7.8 7.7 7.7 7.4 7.4 7.4 7.5 7.4 7.2 7.3 7.4 7.4 7.3 7.4 7.3	7.6 7.5 7.3 7.2 7.0 7.2 7.6 7.6 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	7.3 7.2 7.1 6.9 6.8 7.0 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.4 7.3 7.2 7.1 6.9 7.1 7.4 7.4 7.3 7.4 7.3 7.4 7.3 7.5 7.5

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER		:	DECEMBER	1		JANUARY	
1 2	21.0 18.0	17.0 14.5	19.5 16.0	12.5 12.5	9.5 10.0	11.0 11.5						
3	16.0	13.5	15.0	11.5	9.5	10.0						
4 5	15.0 16.5	14.0 14.0	14.5 15.0	11.5 10.0	8.5 7.0	9.5 8.5						
6	16.5	14.0	15.5	9.5	7.0	8.0						
7	17.0	15.5	16.0	10.0	7.5	9.0						
8 9	17.5 17.0	16.5 16.5	17.0 17.0	11.0 11.5	9.0 9.5	10.0 10.5						
10	18.5	16.5	17.5	11.0	8.5	9.5						
11	19.0	16.5	17.5	13.5	11.0	12.0						
12 13	17.0 18.0	16.0 16.5	16.5 17.0	11.0 10.5	9.0 8.0	10.0 9.0						
14 15	18.0 16.0	15.5 13.5	17.0 15.0	11.0 11.5	8.0 9.0	9.5 10.0						
16 17	16.0 15.5	12.5 12.5	14.0 14.0	10.5 12.0	8.0 10.0	9.5 11.0						
18 19	17.0 18.0	13.5 15.5	15.0 16.5	11.5 10.5	9.0 7.5	10.0 9.0						
20	16.5	13.5	15.0	12.0	10.0	11.0						
21	15.0	13.0	14.0	11.0	9.0	10.0						
22 23	13.0 13.5	11.5 10.0	12.5 11.5	10.0 9.5	8.0 6.5	9.0 8.0						
24	14.5	10.5	12.5	11.0	9.0	9.5						
25	14.5	11.0	12.5	9.5	7.5	8.5						
26	15.0	11.5	13.5	10.0	8.0	9.0						
27 28	15.0 15.0	13.5 13.0	14.0 14.0	10.0 9.5	8.0 6.5	9.0 8.0						
29 30	15.0 13.5	12.0 10.5	13.5 12.0	10.0 11.0	7.5 8.5	9.0 10.0						
31	13.0	9.5	11.0									
MONTH	21.0	9.5	14.9	13.5	6.5	9.6						
DAY	MAX	MTN	MEAN	MAX	MTN	MEAN	MAX	MTN	MEAN	MAX	MTN	MEAN
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUAR	Y		MARCH			APRIL			MAY	
1 2	MAX			6.0 7.0		MEAN 5.5 5.5	MAX 11.5 13.5		MEAN 10.5 12.0	MAX 18.0 18.0		MEAN 15.0 15.0
1 2 3		FEBRUAR	 	6.0 7.0 9.5	MARCH 4.5 3.5 5.0	5.5 5.5 7.0	11.5 13.5 14.5	10.0 10.5 11.0	10.5 12.0 13.0	18.0 18.0 14.5	MAY 12.0 12.5 13.5	15.0 15.0 13.5
1 2		FEBRUAR	Y 	6.0 7.0	MARCH 4.5 3.5	5.5 5.5	11.5 13.5	APRIL 10.0 10.5	10.5 12.0	18.0 18.0	MAY 12.0 12.5	15.0 15.0
1 2 3 4 5		FEBRUAR	 	6.0 7.0 9.5 	MARCH 4.5 3.5 5.0 4.5	5.5 5.5 7.0 5.5	11.5 13.5 14.5 	APRIL 10.0 10.5 11.0 9.5	10.5 12.0 13.0 12.0	18.0 18.0 14.5 16.0 20.5	MAY 12.0 12.5 13.5 13.0 14.5	15.0 15.0 13.5 14.5 17.0
1 2 3 4 5		FEBRUAR	 	6.0 7.0 9.5 6.0 6.0	MARCH 4.5 3.5 5.0 4.5 3.0	5.5 5.5 7.0 5.5 4.5	11.5 13.5 14.5 14.5 15.5	10.0 10.5 11.0 9.5 10.5	10.5 12.0 13.0 12.0 13.0	18.0 18.0 14.5 16.0 20.5	MAY 12.0 12.5 13.5 13.0 14.5	15.0 15.0 13.5 14.5 17.0
1 2 3 4 5 6 7 8 9		FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0	5.5 5.5 7.0 5.5 4.5 3.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 10.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5
1 2 3 4 5 6 7 8 9		FEBRUAR	.Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 10.5 9.0	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0
1 2 3 4 5 6 7 8 9 10		FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 10.5 9.0	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0
1 2 3 4 5 6 7 8 9 10		FEBRUAR	.Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0 3.0 3.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 9.0 9.0 8.5 8.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0	5.5 5.5 7.0 5.5 4.5 3.0 5.0 4.5 4.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 10.5 9.0 9.0 8.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.5 6.0	### 4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0 3.0 3.0 3.0 3.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 11.5 13.0 13.5	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 9.0 9.0 8.5 8.5 9.0 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 7.5 6.0	4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0 3.0 3.0 3.0 4.0	5.5 5.5 7.0 5.5 4.5 3.0 5.0 4.5 4.5 5.0 4.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 13.0	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.5 8.5 9.0 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0 21.0 18.5 18.5 18.5	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5 13.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 16.5 15.5 15.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0	### 4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0 7.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.5 8.5 9.0 9.5 10.5 9.5 8.5 9.5 8.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0 21.0 18.5 18.5 18.5 18.5 18.5	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5 13.5 13.0 13.5 13.0 13.5 13.0	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0 17.0 18.0 15.5 15.5 15.5 15.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	.Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.5 6.0 	### 4.5 3.5 5.0 4.5 3.0 1.0 2.0 3.0 3.0 3.0 3.0 2.0 4.0 7.0	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 9.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 13.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 9.0 9.0 8.5 8.5 9.0 9.5 10.5 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0 21.0 18.5 18.5 18.0	12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 16.5 15.5 15.5 15.5 15.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0 11.0 10.0 10.5	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5 8.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.5 9.0 9.5 8.5 9.5 9.5 8.5 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0 21.0 18.5 18.5 18.5 18.5 18.5 20.5 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5 13.0 13.5 13.0 13.5 13.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0 16.5 15.5 15.5 15.5 15.5 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23		FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 11.0 10.0 10.5	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 8.5 7.0 9.0 8.5 8.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 11.5 10.5 9.0 9.0 8.5 8.5 9.0 9.5 10.5 9.5 8.5 9.5 8.5 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0 21.0 18.5 18.5 18.0 17.0 18.5 20.5 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 15.0 14.5 13.5 13.5 13.5 13.5 13.6 17.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 16.5 15.5 17.0 17.0 16.5 15.5 17.5 17.5 17.5 17.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		FEBRUAR	Y	6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0 11.0 10.0 10.5	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5 8.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.5 9.0 9.5 10.5 9.5 8.5 9.5 9.5 8.5 9.5 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0 21.0 18.5 1	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5 13.0 13.5 13.0 14.5 17.0 15.0 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0 18.0 15.5 15.5 17.5 17.5 17.5 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	 4.5	FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 10.0 10.0	4.5 3.5 5.0 1.0 2.0 3.0 3.0 3.0 3.0 2.0 7.0 6.5	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5 8.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.5 8.5 9.0 9.5 10.5 9.5 8.5 9.5 9.5 8.5 9.5 9.5 9.5 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 20.0 21.0 18.5 18.5 18.5 18.5 20.0 20.5 17.0 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 13.5 13.5 13.5 13.0 17.0 15.0 14.5 17.0 16.0 13.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 16.5 15.5 15.5 17.5 17.5 17.5 17.5 17.5 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 27	 4.5 5.0	FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0 11.0 10.0 10.5 8.5 9.0 10.0	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5 8.0 8.0 7.5	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 10.5 9.0 9.0 8.5 9.0 9.5 10.5 9.5 8.5 9.5 9.5 8.5 9.5 9.5 10.0 12.0 9.5	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0 21.0 18.5 17.0 18.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 14.5 13.5 13.5 13.0 13.5 13.5 15.0 17.0 16.0 13.5 17.0 16.0 13.5 17.0 16.0 13.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 17.0 16.5 15.5 17.5 17.5 17.5 17.5 17.5 17.5 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	 4.5 5.0	FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 7.0 7.0 7.0 7.0 11.0 10.0 10.5 8.5 8.0 9.0 10.0	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 8.5 8.0 8.0 8.0 8.5 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 8.5 8.5 9.0 9.5 10.5 9.5 8.5 9.5 8.5 9.5 10.5 9.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.0 11.0 11.0 11.0 11.0 12.5 13.0 12.0 12.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0 21.0 18.5 18.5 18.0 17.0 18.5 20.5 18.5 20.0	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 14.5 15.0 15.0 14.5 13.5 13.5 13.5 13.5 13.6 13.5 13.5 13.6 13.5 14.5 14.5	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 16.5 15.5 15.5 17.5 17.5 17.5 17.5 17.5 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30	 4.5 5.0 6.5 6.0 6.5	FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0 11.0 10.0 10.5 8.5 9.0 10.0 10.0	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 7.0 9.0 8.5 8.5 7.0 8.0 8.0 7.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.5 12.0 11.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 10.5 9.0 9.0 8.5 9.0 9.5 10.5 9.5 8.5 9.5 9.5 10.0 12.0 9.5 10.0 11.5 12.0 11.5 12.0	10.5 12.0 13.0 12.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.0 11.0 11.0 11.0 11.0 12.5 13.0 12.0 12.0 12.5 13.0 14.5 13.0	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 17.0	12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 15.0 14.5 13.5 13.5 13.5 13.5 13.5 15.0 17.0 15.0 17.0 15.0	15.0 15.0 13.5 14.5 17.0 16.5 15.5 17.0 17.0 17.0 16.5 15.5 17.5 17.5 17.5 17.5 17.5 17.5 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	 4.5 5.0 6.5 6.0 6.5	FEBRUAR		6.0 7.0 9.5 6.0 6.0 5.5 4.0 7.0 7.0 5.5 7.5 6.0 9.0 11.0 10.0 10.5 8.5 8.0 9.0 10.0	### ### ### ### ### ### ### ### ### ##	5.5 5.5 7.0 5.5 4.5 3.0 3.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 8.5 7.0 9.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.5 13.5 14.5 14.5 15.5 17.0 15.5 13.0 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5 12.0 11.5	APRIL 10.0 10.5 11.0 9.5 10.5 10.5 9.0 9.0 8.55 9.0 9.5 10.5 9.5 8.5 9.5 8.5 9.5 10.0 12.0 9.5 10.0 11.5	10.5 12.0 13.0 13.0 14.5 13.0 11.0 9.5 10.0 10.5 11.5 11.0 11.0 11.0 11.0 11	18.0 18.0 14.5 16.0 20.5 17.5 16.0 18.5 18.5 20.0 21.0 18.5 18.5 18.0 17.0 18.5 20.5 18.5 20.0 20.5	MAY 12.0 12.5 13.5 13.0 14.5 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	15.0 15.0 13.5 14.5 17.0 16.5 15.5 16.5 17.0 17.0 16.5 15.5 15.5 17.5 17.5 17.5 17.5 17.5 17

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBE	ER.
1 2 3 4 5	23.0 24.5 23.0 23.0 22.5	18.5 20.0 20.5 18.5 17.5	21.0 22.0 21.5 20.5 19.5	23.5 25.5 26.5 28.5 30.5	21.5 22.5 22.5 23.5 24.5	22.5 23.5 24.0 25.5 27.0	29.0 27.5 26.5 26.5 25.0	24.5 22.5 21.5 21.0 21.5	26.5 25.0 23.5 23.5 23.0	21.5 22.0 23.0 22.0 23.0	18.0 18.0 18.0 20.0 21.0	19.5 20.0 20.0 21.0 22.0
6 7 8 9 10	23.5 25.5 27.5 27.0 23.5	17.5 19.0 21.5 21.0 20.0	20.0 22.0 24.0 23.5 21.5	31.0 29.5 27.5 27.5 25.0	25.0 25.0 22.0 21.0 23.0	27.5 27.0 24.5 24.0 24.0	26.0 26.0 24.5 25.5 24.0	20.0 20.5 23.0 21.0 19.0	22.5 23.0 23.5 23.0 21.5	23.5 24.0 25.5 24.5 22.5	21.0 22.0 22.0 22.0 21.0	22.0 23.0 23.5 23.0 22.0
11 12 13 14 15	24.0 21.0 21.5 23.0 25.0	18.0 17.5 20.0 20.0 20.5	20.5 19.5 20.5 21.5 22.5	26.0 22.0 25.0 23.0 25.5	20.0 19.5 19.5 20.0 18.5	22.5 21.0 21.5 21.5 21.5	25.0 25.5 26.0 26.5 24.0	20.0 21.0 22.5 23.5 22.5	22.5 23.0 24.0 24.5 23.5	23.0 22.5 22.5 22.0 20.5	19.0 18.0 18.0 19.0 19.5	20.5 20.0 20.0 20.0 20.0
16 17 18 19 20	23.0 21.0 21.5 22.0 20.0	19.0 19.0 17.5 17.0 18.0	21.0 19.5 19.5 19.5 19.0	27.0 28.5 28.5 28.0 25.5	21.0 22.0 22.5 23.0 23.0	23.5 25.0 25.0 25.5 24.0	26.0 27.0 26.0 25.0 22.5	22.0 22.0 22.5 21.0 20.5	23.5 24.0 24.0 22.5 21.5	21.0 	17.5 	19.0
21 22 23 24 25	19.0 23.5 24.5 25.0 23.5	17.5 17.0 18.5 19.0 19.5	18.5 20.0 21.0 21.5 21.5	25.5 25.5 28.0 26.0 28.5	21.5 22.5 23.0 23.0 23.0	23.5 24.0 25.0 24.5 25.5	20.5 22.0 24.5 23.5 23.5	19.5 18.5 18.0 20.0 19.5	20.0 20.0 20.5 21.5 21.5	15.0 15.5 15.5	13.5 12.5 13.0	14.5 14.0 14.0
26 27 28 29 30 31	26.0 26.5 25.0 27.0 24.5	20.5 22.0 23.0 23.0 22.5	23.0 24.0 24.0 24.5 23.0	27.5 28.0 28.0 27.0 27.0 28.5	22.5 22.5 22.5 22.0 22.0 23.0	25.0 25.0 25.0 24.5 24.5 25.5	25.0 25.5 21.5 21.0	20.5 21.0 19.0 18.0	22.5 22.5 22.5 19.5	18.0 19.0 18.5	16.0 17.0 16.5	17.0 18.0 17.5
MONTH	27.5	17.0	21.3	31.0	18.5	24.3	29.0	18.0	22.6	25.5	12.5	19.6

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER		N	OVEMBER		:	DECEMBER			JANUARY	
1 2 3 4 5	10.7 11.4 12.3 9.9 11.8	6.9 7.5 8.4 8.8	8.4 9.1 10.0 9.2 9.9	13.4 13.6 13.7 13.6 14.3	8.8 8.7 9.0 9.2 9.6	10.5 10.5 10.7 10.8 11.3	 			 		
6 7 8 9 10	11.7 11.7 9.1 9.1 10.3	8.6 8.4 7.3 8.4 8.9	9.7 9.6 8.5 8.9	14.3 14.7 14.3 15.3 12.7	9.8 9.2 9.0 8.9 9.0	11.3 11.3 10.6 11.1 10.3				 	 	
11 12 13 14 15	10.4 10.1 9.8 9.6 11.0	9.7 7.9 9.3 8.4 8.4	10.1 9.7 9.6 9.2 9.5	12.6 13.5 13.6 14.3 14.2	8.3 8.5 9.4 9.2 8.9	9.5 10.5 10.9 10.9				 	 	
16 17 18 19 20	11.4 11.9 11.9 11.3 11.9	9.1 9.1 8.4 7.9 8.0	10.0 10.2 9.9 9.2 9.4	14.7 14.5 14.1 14.8 12.6	8.9 8.8 8.8 8.6 7.9	11.0 10.7 10.6 10.9 9.6	 	 	 	 	 	
21 22 23 24 25	12.5 12.5 12.9 12.9 12.8	8.6 9.1 9.6 9.1 8.8	10.0 10.5 10.7 10.5	13.4 13.5 12.8 11.7 11.3	7.9 8.4 7.9 7.5 7.2	9.9 10.1 9.8 8.8 8.7				 		
26 27 28 29 30 31	13.4 12.1 11.7 12.1 12.5 12.8	8.5 8.4 8.2 8.1 8.6 8.9	10.2 9.8 9.5 9.5 10.0	 			 			 		
MONTH	13.4	6.9	9.7	15.3	7.2	10.4						

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
	FEBRUARY				MARCH			APRIL			MAY		
1 2 3 4 5		 		12.7 	10.0	 11.4 	12.6 14.1 14.4 	9.1 8.8 8.6 	10.7 11.0 11.0	13.6 13.8 12.0 13.0 13.5	8.4 8.4 8.6 7.6	10.5 10.6 10.1 10.5 10.1	
6 7 8 9 10	 	 	 	12.3 13.1 13.2 13.1 12.6	10.5 10.3 10.9 10.7	11.3 11.7 12.0 11.8 11.2	14.8 14.7 13.2 11.8 11.5	9.0 8.5 7.9 7.7 9.5	11.3 11.1 10.4 9.6 10.4	11.9 11.5 12.1 12.2 12.9	7.5 8.5 8.2 8.2 8.4	9.2 9.7 9.9 10.0 10.2	
11 12 13 14 15	 	 	 	13.0 13.9 14.1 13.8	9.9 10.5 10.7 10.5	11.4 12.0 12.2 11.9	11.3 11.8 12.4 12.5 12.8	9.5 10.0 9.6 9.4 9.3	10.5 10.8 10.9 10.8 10.8	13.8 11.0 13.4 13.7	8.2 7.6 9.2 9.4	10.6 9.4 11.1 11.1	
16 17 18 19 20	 	 	 	14.4 14.0 15.4 16.5	10.7 10.5 10.5 10.9	12.2 11.9 12.6 13.2	11.6 13.0 13.6 14.0 13.3	9.2 9.6 9.7 9.6 10.1	10.2 11.1 11.2 11.6 11.4	13.6 13.0 11.8 9.4 10.7	9.4 9.2 8.2 7.7 8.0	11.3 10.9 9.9 8.4 9.1	
21 22 23 24 25	 	 		15.1 	10.8	12.5	14.0 13.7 12.2 13.7 13.7	10.3 9.1 8.9 9.7 9.4	12.0 11.3 10.3 11.4 11.4	10.8 10.8 9.5 9.0 10.4	7.9 8.0 7.7 8.4 9.0	9.1 9.1 8.5 8.7 9.8	
26 27 28 29 30 31	 	 	 	 	 	 	13.3 13.3 13.2 13.4 13.5	8.8 8.6 8.8 8.7 8.5	10.9 10.6 10.8 10.7 10.5	10.5 10.8 10.8 10.1 9.7 9.5	9.3 9.2 8.6 8.0 7.8 7.8	9.9 9.9 9.7 9.1 8.6 8.5	
MONTH				16.5	9.9	12.0	14.8	7.7	10.9	13.8	7.5	9.8	
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
DAY 1 2 3 4 5	9.5 9.3 9.7 10.2 10.2	MIN JUNE 7.7 7.5 7.0 7.3 7.7	8.4 8.3 8.1 8.7 8.8	9.2 9.8 9.5 9.4 8.8	MIN JULY 6.4 6.4 6.3 5.7 5.3	7.5 7.7 7.6 7.2 6.6	10.1 10.0 10.2 9.9 9.7	MIN AUGUST 4.7 4.9 5.8 6.1 5.8	6.9 7.0 7.6 7.6 7.5		MIN SEPTEMBE 6.3 5.9 6.1 5.4 4.1		
1 2 3 4	9.5 9.3 9.7 10.2	7.7 7.5 7.0 7.3	8.4 8.3 8.1 8.7	9.2 9.8 9.5 9.4	JULY 6.4 6.4 6.3 5.7	7.5 7.7 7.6 7.2	10.1 10.0 10.2 9.9	4.7 4.9 5.8 6.1	6.9 7.0 7.6 7.6	8.9 9.0 9.5 8.2	6.3 5.9 6.1 5.4	7.3 7.1 7.4 6.7	
1 2 3 4 5 6 7 8 9	9.5 9.3 9.7 10.2 10.2 9.9 8.4 8.8	7.7 7.5 7.0 7.3 7.7 7.4 6.4 6.0	8.4 8.3 8.1 8.7 8.8 8.5 7.2 7.3	9.2 9.8 9.5 9.4 8.8 8.5 8.7 8.8 9.2	6.4 6.4 6.3 5.7 5.3 5.1 4.8 5.4	7.5 7.7 7.6 7.2 6.6 6.4 6.3 6.8 7.1	10.1 10.0 10.2 9.9 9.7 9.7 10.1 8.5 9.0	4.7 4.9 5.8 6.1 5.8 6.0 5.8 5.1	6.9 7.0 7.6 7.5 7.5 7.5 6.2	8.9 9.0 9.5 8.2 7.3 7.8 7.7 8.0 7.5	6.3 5.9 6.1 5.4 4.1 5.2 6.1 5.8 5.6	7.3 7.1 7.4 6.7 5.6 6.8 6.8 6.8 6.3	
1 2 3 4 5 6 7 8 9 10 11 12 13 14	9.5 9.3 9.7 10.2 10.2 9.9 8.4 8.8 8.7 9.6 9.8 9.4 9.3	7.7 7.5 7.0 7.3 7.7 7.4 6.4 6.0 5.9 7.0 6.9 7.0	8.4 8.3 8.1 8.7 8.8 8.5 7.2 7.3 7.1 8.0 8.2 8.0 7.9	9.2 9.8 9.5 9.4 8.8 8.5 8.7 8.8 9.2 8.8	5.7 5.3 5.7 5.3 5.1 4.8 5.7 5.4 6.1 6.2 6.5 6.3	7.5 7.7 7.6 7.2 6.6 6.4 6.3 6.8 7.1 6.8 7.5 8.1 7.9	10.1 10.0 10.2 9.9 9.7 10.1 8.5 9.0 8.9	4.7 4.9 5.8 6.1 5.8 6.0 5.8 5.1 4.7 4.3	6.9 7.6 7.5 7.5 7.5 7.5 6.4 6.3 9.6 5.8	8.9 9.0 9.5 8.2 7.3 7.8 7.7 8.0 7.5 7.5 7.5 7.0 7.7	6.3 5.9 6.1 5.4 4.1 5.2 6.1 5.6 5.6 5.6	7.3 7.1 7.4 6.7 5.6 6.8 6.8 6.3 6.5 6.4 5.8	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9.5 9.3 9.7 10.2 10.2 9.9 8.4 8.8 8.7 9.6 9.8 9.3 9.6	7.7 7.5 7.0 7.3 7.7 7.4 6.4 6.0 5.9 7.0 7.0 7.0 6.7	8.4 8.3 8.1 8.7 8.8 8.5 7.2 7.3 7.1 8.0 8.2 8.0 7.9 7.9 8.2 7.9	9.2 9.8 9.5 9.4 8.8 8.5 8.7 8.8 9.2 8.8 9.5 9.8 10.5 10.3 10.7	5.7 5.3 5.7 5.4 5.7 5.4 6.1 6.5 6.3 6.4 6.5 5.7	7.5 7.7 7.6 7.2 6.6 6.4 6.3 6.8 7.1 6.8 7.5 8.1 7.9 8.1 7.8 7.4 7.4 7.5	10.1 10.0 10.2 9.9 9.7 10.1 8.5 9.0 8.9 8.3 9.7 9.1 8.2 8.4	4.7 4.9 5.8 6.1 5.8 6.0 5.8 5.1 4.7 4.3 3.9 4.5 4.7 4.4 5.0 4.9	6.9 7.6 7.5 7.5 7.5 6.4 6.6 6.6 6.6 6.6 6.6	8.9 9.0 9.5 8.2 7.3 7.8 7.7 8.0 7.5 7.5 7.5 7.0 7.7 7.3 6.4	5.2 6.1 5.4 4.1 5.2 6.18 5.6 5.6 5.6 5.6 5.7	7.3 7.1 7.4 6.7 5.6 6.8 6.8 6.3 6.5 6.4 5.8 6.1 6.2 5.6	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	9.5 9.3 9.7 10.2 10.2 9.9 8.4 8.8 8.7 9.6 9.8 9.3 9.6 10.4 9.1 10.2 10.3 10.2	7.7 7.5 7.0 7.3 7.7 7.4 6.4 6.0 5.9 7.0 7.0 7.0 6.7 6.6 7.5 7.3 7.7 7.2 7.2 7.0 6.8	8.4 8.3 8.1 8.7 8.8 8.5 7.2 7.3 7.1 8.0 8.2 8.0 7.9 7.9 8.2 7.9 8.7 8.6 8.7 8.6 8.7 8.6	9.2 9.8 9.5 9.4 8.8 8.5 8.7 8.8 9.2 8.8 9.5 9.8 10.5 10.3 10.7	JULY 6.4 6.4 6.3 5.7 5.3 5.1 4.8 5.7 5.4 6.1 6.2 6.3 6.4 6.0 5.5 5.7 5.3 4.6 6.0 6.2 6.2 6.3	7.5 7.7 7.6 7.2 6.6 6.4 6.8 7.1 6.8 7.5 8.1 7.8 8.1 7.4 7.4 7.5 6.6 8.0 7.6 7.6 7.6	10.1 10.0 10.2 9.9 9.7 9.7 10.1 8.5 9.0 8.9 8.3 9.7 9.1 8.2 8.4 9.0 9.7 9.1 9.0 8.9	4.7 4.9 5.8 6.1 5.8 6.0 5.8 5.1 4.7 4.3 3.9 4.5 4.7 4.4 5.0 4.9 5.1 4.9 5.1 4.9 5.1 4.7	6.9 7.6 7.5 7.5 7.5 6.4 8.6 9.6 6.6 6.2 7.3 6.4 6.4	8.9 9.0 9.5 8.2 7.3 7.8 7.7 8.0 7.5 7.5 7.5 7.7 7.3 6.4 8.3	5.2 5.4 4.1 5.2 6.18 5.6 5.6 5.6 5.7 	7.3 7.1 7.4 6.7 5.6 6.8 6.8 6.3 6.5 6.4 5.8 6.1 6.2 5.6	